

IMNE-2024 conference will be held in the Dovholuka village, Stryi district, Lviv region, Ukraine. Organizers might organize the shuttle for groups, but the participants must contact the organizing committee in advance.

ACCOMMODATION

Relax Complex Shepilska

All the delegates will be accommodated in Relax Complex "Shepilska," located near the Carpathians between the Morshyn and Truskavets resorts and are the best place for relaxation and scientific conferences. This hotel is in a quiet location on Lake Shepilska, a 20-minute drive from the city of Stryi. All rooms of the "Shepilska" recreation complex are decorated in light colors, and the cottages are decorated with wood. The restaurant of the Shepilska complex serves Ukrainian and European cuisine.

Website: https://shepilska.com.ua Hotel on a map: https://goo.gl/maps/wh1BkSziUj84mCSc7



CONFERENCE FEES

	Early bird (before September 5 th), EUR	Regular, EUR
Standard fee (offline)	260	300
PhD-students	50	70

The conference fee covers all conference materials, catering, coffee breaks, conference banquet, and twothree meals a day. Additionally, it is possible to reserve accommodation (single and double rooms) before contacting the organizing committee members. Please note that the organizers have a limited number of single rooms. Thus, the first-come, the first-served.



Publications selected by the IMNE-2024 Program Committee will be submitted free of charge to the Ukrainian Journal of Physical Optics.

CONTACTS



Center of Excellence for Innovative Technologies and Nanoengineering, Department of Applied Physics and Nanomaterials Science, Lviv Polytechnic National University 5 Ustyianovycha str., Build. 10, office 32 79000, Lviv, Ukraine tel.: +38 (032) 258 27 08 E-mail: <u>imne@lpnu.ua</u> Web-site: <u>https://imne.lpnu.ua</u>

The conference is supported by the IMAGE project of the Horizon 2020 program. For more information on the project and main outcomes, please visit the project website: <u>https://project-image.eu</u> (or <u>https://itne.lpnu.ua</u>)





CALL FOR PAPERS



4th International Conference on INNOVATIVE MATERIALS AND NANOENGINEERING (IMNE-2024)

> Dovgoluka, Lviv region, UKRAINE September 13-16, 2024

This conference has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 778156.



4th International Conference on INNOVATIVE MATERIALS AND NANOENGINEERING (IMNE-2024), 13-16 September 2024

INTERNATIONAL PROGRAMME COMMITTEE

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Prof. Vakiv M. Scientific research company Carat – branch enterprise of Concern-Electron, UKRAINE
Prof. Vitusevich S. Forshungszentrum Julich GmbH, GERMANY
Prof. Yashchyshyn Ye. Warsaw University of Technology, POLAND (Vice-chairman)

CFFICIAL LANGUAGE

The official language of the conference is English. The abstracts, presentations, and posters must be in English to be published in the Conference Programme and Proceedings.

Organized by:

- Lviv Polytechnic National University, Ukraine
- Private Enterprise SoftPartners, Ukraine
- Private Enterprise UkrTechPro, Ukraine

ORGANIZING COMMITTEE

Chairman:	Prof. Anatoliy Andrushchak Lviv Polytechnic National University, UKRAINE
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Conference Secretary:	Dr. Nazariy Andrushchak, Lviv Polytechnic National University, Private Enterprise SoftPartners, UKRAINE

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Dr. Zinoviy Kogut	Lviv Polytechnic National University, UKRAINE
Dr. Roman Shvets	Lviv Polytechnic National University, UKRAINE
Dr. Andrii Bendak	Lviv Polytechnic National University, UKRAINE

ABOUT IMNE CONFERENCE

IMNE conference aims to gain and exchange knowledge on a wide range of innovative materials and nanoengineering. Accordingly, the conference is focused on advanced bulk and nanomaterials, their synthesis, and characterization by various experimental optical and quasioptical techniques. IMNE appears to be an excellent platform to discuss the basic principles involved in developing innovative materials and relevant optical and terahertz technology and present recent results. Delegates, represented by both academicians and businesspeople, may attend the conference to get up the knowledge and excel in this field.



INNOVATIVE MATERIALS

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Organic and inorganic nanomaterials and thin films. MXenes materials. Semiconductor and metal nanocrystals. Mesoporous materials. Metamaterials. Ceramics. Innovative crystalline materials. Polymer-nanocrystal composites. Liquid crystalbased nanocomposites. Carbon nanomaterials. Nanocrystallites and nanocrystal composites. Disordered and ordered nanoporous thin films.

OPTICAL AND QUASIOPTICAL TECHNIQUES FOR MATERIALS CHARACTERIZATION

Chemical characterization. Optical polarimetry and ellipsometry. Mechanical and elastic properties. Electro-, piezo- and magneto-optical properties. Nonlinear optical properties. Spatial anisotropy of induced optical effects. Dielectric spectroscopy. SubTHz and THz spectroscopy. Optical investigations in a visible range. Raman and IR spectroscopy. SEM, TEM, EDX techniques. Structural Xray characterization. Electron diffraction (SAED, HRTEM).

NANOENGINEERING TECHNOLOGIES AND PROCESSES

Synthesis of organic and inorganic nanomaterials, including MXenes. Nanoparticles synthesis. Polymer nanotechnology. Manufacturing of Al₂O₃, TiO₂, Si and SiO₂ nanoporous membranes. Crystalline nanocomposites with tailored anisotropy. Nanophysical models: micr oscopic and phenomenological approaches. Nanostructured coatings. Different methods of new materials development: porous matrices, nanocomposites.

APPLICATIONS OF INNOVATIVE MATERIALS

Novel innovative materials and its applications. Practical using of MXenes. Application for spatial anisotropy of induced optical effects. Nanoconfinement effects. Micro- and Nanofluidics. Numerical simulation methods. Dynamic mechanical analysis (DMA). Nanophysics applications. Nanocomposites for UV, VIS, IR, and THz applications. Nanomaterials in medical and biophysical applications. Carbon nanostructures and devices. Innovative materials in micro and nanoelectronics.

SUBMISSION INSTRUCTIONS

The abstract should be prepared and submitted to the Organizing Committee only in electronic form. At least two referees from the International Programme Committee will review the abstracts. The abstract template with instructions on submission is available on the Conference Web Page (<u>https://imne.lpnu.ua</u>).